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                    * ST REPORT CONFIDENTIAL *
==
EXCLUSIVELY ON: COMP-U-SERVE   ~   GENIE   ~   DELPHI
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From the Editor's Desk:

A very interesting experiment is to have a group of forty or so people
read a paragraph and then to write out exactly what they read. Not
verbatim, but from memory. Most of us are amazed at the different
interpretations of a simple paragraph by different folks. ie: Who had
their opinion influenced by the day's events, level of health, state of
mind etc....yes, I am leading up to something...and here it is.

Recently, we saw a letter from Sam Tramiel which was available in this
publication as well as almost everywhere else in the Atari world. I found
that after having read and reread it I felt like I was being patted on the
head and being told, "now be a good little boys and run along".

I feel this needs to be said about "THE OPEN LETTER".

In this "open letter", Sam mentioned that he was distressed over all
the negative comments and articles...Sam, YOU should have been distressed
over the CAUSES of all the comments and articles.
Whether "Negative or Positive", THAT is your perception of what you read,
we saw all the articles and comments as STRONG CONSTRUCTIVE CRITICISM that
apparently, Atari needs.

We see you ask us to be "EVANGELISTS", we have been just that for almost

three years while Atari was busy romancing Europe and leading us down
"primrose lane" here in the good ole' USA. We will continue to promote
the ST/MEGA not because you ask at this late date, but because the ST/MEGA
computers are indeed quality computers.

However, since you are in an asking mood, We ASK ATARI TO:

   (a) DISTRIBUTE AND ADVERTISE THE ST/MEGA COMPUTERS IN THE USA...

   (b) REBUILD THE DEVELOPER - ATARI RELATIONSHIP It is at it's lowest!

   (c) MAKE SURE NO USER MUST TRAVEL MORE THAN 50 MILES TO VISIT A DEALER
       FACE TO FACE.

   (d) DO WHAT YOU SAY YOU ARE GOING TO DO...

   (e) STOP TREATING THE US USERBASE LIKE WEDNESDAY'S CHILD...

We see various incidents occur constantly that crank up the "ire" of both
the Dealers and the users ie, 520STFM shipped with D/S drives to Federated
and regulars get the machines with S/S drives...that is a low blow to both
the dealers and the customers. We have been waiting close to a month for
a reasonable explanation for this incident. My guess is we will never
hear the straight story.

While waiting, we have received reports that stores on the east coast now
have 520stfm computers with D/S drives in them. Where does that leave the
customer who just purchased a 520stfm in the last ninety days?   STUCK?
I don't want to believe that, but your silence on the issue is highly
suspicious. You can be sure that by ignoring this and other little
problems they will not go away. Problems are solved... Not ignored.

You will find an open letter of suggestions in this issue from a very
concerned and concientious user. We felt sufficiently moved by this
letter to publish it for all our readers to see. Sam, we are not
convinced yet that Atari is going to be responsive to the needs and
future of the marketplace. What we want to know is will you take the
time to answer the "crys" from the depths of the userbase ...from those
who honestly care?

Oh, and as an after thought:

                "It is not what you say....but how you say it".
                        (Right Neil? [grin])

                        Rex........

I INCLUDE "THE OPEN LETTER" TO ELIMINATE ALL POSSIBLE MISQUOTES:

                TO ATARI USER GROUPS AND ALL ATARI ENTHUSIASTS:

     I was disappointed to read the negative letters and articles
regarding comments made by Neil Harris at the West Coast Computer
Faire. We at Atari feel that our computers are the clear
technological leaders in their classes. The XE/XL line is superior to
the Commodore 64, and the ST series beats any '286 or 8088 MSDOS
machine; it also beats the touted Macintosh (68000) machines, and even
surpasses the Amiga in all areas except for internal sound.

The educational, productivity, and entertainment software available for the Atari machines makes for an excellent combination which yields many uses. My family knows, as we use an 800XL, an XE Game Machine, and a 1040STf. Neil was only saying that the future will bring EVEN MORE POWERFUL computers which will be easier to use, and I am sure he is right. This statement is not meant to belittle today's models or users.

While I am communicating with you, let me clear up a few things and also ask for your help.
The DRAM shortage is still with us and it is inhibiting our distribution in the U.S. We hope this will get better in the 4th quarter of '88. In the meantime, we will CONTINUE TO SUPPORT ATARI COMPUTER presence in the U.S. We will advertise this fall to keep our presence in the U.S.

I ask all of you two things: first, please do not pirate software. Talk your friends out of it also. The software community is suffering and complaining, please police pirating so Atari software companies can thrive. The other favor I ask of you is to be the evangelists of the Atari world. Tell your friends, associates, teachers, etc., how great the XE/XL and ST are.

LET'S WORK TOGETHER TO MAKE THE ATARI MACHINES A STANDARD IN THE U.S.

--- Sam Tramiel, President, Atari Corporation

Got any comments?...send them to Rex at ST Report South or on
Delphi, GEnie, or Compuserve..

THE JUDGES LIST
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Service	Name
CIS	Ron Luks
CIS	Dan Rhea
CIS	Mike Schoenbach
GEnie	Darlah Hudson
GEnie	Fred Beckman
GEnie	Sandy Wilson

ST-Report Official Contest Rules
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No purchase necessary.

Deadline for consideration in this contest is midnight August 31, 1988.

Winners will be announced in ST-Report on September 12, 1988. We guarantee to award all prizes. The prize list will be announced during the contest.

All readers are eligible to enter except employees of APEInc.

Publishing, CompuServe, GEnie, Delphi and their immediate families.

This contest void where prohibited or restricted by law. We are not responsible for lost, mis-marked, or delayed art/work.

All submissions must be drawn with any Atari ST drawing program.

All submissions must be drawn by the original artist. Copyrighted art work will not be accepted.

All submissions become the property of APEInc.

All submissions must be uploaded to specified BBS systems by the deadline date. All systems have time and date stamping capability. Any entry dated after 8/31/88 will be void from the contest.

Art Work Requirements

All art work considered for this contest must be drawn with any Atari ST drawing program.

Any person submitting art work must leave an address, telephone number, and drawing program used.

Artwork must contain the following:

ST-REPORT

The winning entry will be used at a later date for a newsletter or magazine cover.

Where to Send

        All art work may be uploaded to the following systems.

                Syndicate BBS   (201) 968-8148
                Bounty ST BBS   (904) 786-4176

Entries by mail are also permitted. Be sure to use a 3.5 floppy S/S! You may send to:

                ST-Report Logo Contest
                   Post Office Box 74
               Middlesex, New Jersey 08846-0074

   (Please include your name, address and telephone number)

Updates

This contest will update uploading areas every two weeks. Contest rules will not be changed, but judges may be added during the run of the contest.

Current judge listing will be published next week.

This contest commences May 2, 1988 and will end Midnight August 31, 1988.

If you have any questions, Please leave email on the services at the
following addresses:

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                CompuServe:   71777,2140
                GEnie    :    ST-REPORT
                         :    R.KOVACS
                DELPHI   :    RONKOVACS
                The Source:   BDG793
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Rules and Regulations:

1). Use any full color program written exclusively for the ST to draw
     your own personal design of an ST-Report logo.

2). Art work ported over from any other computer is void.

3). No X-rated art work will be accepted.

4). Winners will be announced by mail, email, phone call or equivalent
     on or before September 12, 1988.

5). Judges decisions are final.

                    AN OPEN LETTER TO ATARI CORP
                    ============================

Here's a proposal for Atari. It seems to me (from what I've heard at
the superworkstation company I'm working for this summer and experienced
during three years at Stanford University) that there are a few things
Atari needs to do now to avoid _losing_ market share as well as to gain
more. This starts out sounding negative, but ends up positive so bear
with me. Any replies are welcomed.

Dear Atari:

1. Even people who _know_ about the Atari ST computers see them as
   stagnant, especially as far as graphics are concerned. Someone
   who works with me (and is very familiar with Macintosh II computers)
   was shocked to hear that we only had 512 colors available. His
   response was "Do you mean at one time?" Then when he heard sixteen
   at one time, his interest ended. It shouldn't be too difficult to
   modify SHIFTER and the MMU to provide, say, 256 colors in low rez,
   and sixteen in medium from a palette of 4096 or more. While you're
   at it, how about making the MMU support 8 or 16 meg? For the graphics,
   all you have to do is read more information at a time. You could
   still support the same monitors. Or how about gray scaling on the
   graphics, even using the same resolutions as the current ST monitors,
   you'd sell twice as many computers and regain the interest of the
   academic world.

2. The same people see the ST as a dead end. It's not even possible to
   upgrade the memory without soldering or buying "special trick"
   boards which plug into all sorts of different sockets. How about

using SIMM's like everyone else, Atari? You could make ST's easy to
expand (what a concept!). I find it hard to believe that even your
"high end" Mega computers can't be expanded. (And many others too.)

3. Three cheers for the GDOS installation program! That's the right way
   to go. For one thing, GDOS is a very advanced system as graphics go.
   biggest problem has been that people can't figure out how to use it.
   Your installation program makes that easy! I couldn't believe what a
   simple matter it was to change from high resoultion to medium
   resoultion fonts on my boot disk. One thing I really think you do
   need is outline fonts, though. People familiar with Macintosh expect
   to have a good number of fonts available. This is easy when your
   printer fonts are the same as your screen fonts, (as in the Macintosh
   computer), but to be device independent has its price in memory. If
   you can implement scalable outline fonts _in_ _addition_ _to_ raster
   fonts (like current GDOS fonts), people with little memory will be
   able to use a variety of fonts, and those with more memory will still
   be able to enjoy the speed of raster fonts. All this without
   rewriting anything but the device drivers and GDOS!

4. Few people know that Atari makes computers, and many of those who
   do don't think very much of them. I suggest that you make up a large
   number of bumper or window stickers that have a brightly colored
   Fugi on them with the words "Atari Personal Computers" or something to
   that effect. You might want a picture of an ST and a MEGA. I see
   people all over with Apple stickers on their cars, and I think that
   if you distributed these, free of charge, to user groups and people
   who wrote requesting them (even on GEnie) you would get widespread,
   "advertising without the price." Be sure to put the word computer
   on them!

5. Finally, a good educational discount is essential! When students
   get a computer, that's often what their parents end up with, and
   that's the computer they'll lean towards when _they_ are making the
   purchasing decisions for their company when they graduate. To get
   this going, you will need to compete with Apple. Atari will probably
   need to donate a few computers and a laser printer or at least offer
   them a deal they can't refuse. Stanford students buy Macintoshes
   not only because they can find them (at a very good price) at the
   Stanford bookstore, but also because they can go to the library and
   print their papers on an Imagewriter there (or, for a price, on an
   Apple LaserWriter).

Please keep in mind that these opinions have been formulated over my
very nearly three years as an ST owner. I believe in my computer's
potential, and in that of Atari, but other people still need convincing.
Don't rest on your laurels, Atari! The Amiga already has more flexible
graphics, and the 2000 model's memory, CPU, and graphics are upgradeable!

                                        Steve Whitney
                                         S.WHITNEY

Editor Note: We felt this letter made some very strong and valid points
for the Atari Genius Designers to ponder..thanks Steve, maybe ..just maybe
they may listen or perhaps a third party developer will release an
expansion cabinet that will allow us to use expansion cards etc...

                         ATARI SLM804 REVEALED
                         =====================

by T."Rex" Reade

Not trying to be negative toward Atari all the time is rather difficult
when we find information arriving in "Brown manilla envelopes" with a
letter explaining why it was sent to us and a few other publications.
Below is a list presented for your examination, please look it over
carefully and if you have any questions or solutions please send them in
and we will be happy to foward them to the proper parties.

[A] Loading any desk accessory or tsr that picks up trap #13 vector will
cause the Diablo Emulator to be lost. It must then be reloaded (along
with its fonts). This can be duplicated with ST Informer's RAM disk /
spooler, DeskCart! Spooler, Turbo ST, and WP_spool, it looks like
every spooler would have the same problem.

[B] The SLM804 laser uses microspacing to set proportional spacing
character widths and space. In microspacing the printer controls the
width of the character and its position. The only thing the software
needs to know is how far the print head actually moves. This is the
preferred method because it is faster, cleaner and less likely to have
unevenly or incorrectly positioned characters.

The problem that arises is in the fact that a Diablo is an HMI
controlled printer where the width of each character is set before
the character is sent and has no provisions for controlling the printer
on its level. Therefore, it is difficult to get properly spaced text.

[C] The SLM804 prints in 1/300 inch increments but, the Diablo uses
1/120 inch increments. This causes frequent round off errors.
In cases like WordPerfect and other high quality programs, where
the program is capable of printing in 1/300 inch, you must measure
characters to 1/300 inch, convert them to 1/120 for the Diablo,
(which causes round off errors), send them to the Diablo, which takes
the 1/120 inch character width, converts it to 1/300 inch (which causes
round off errors) then prints. On a multi column document with few
characters per column this can look completely unacceptable. WHY?

[D] The buffer in the SLM804 DRIVER is only 38K bytes.!! This was done
to make it fit on a 520 ST. A laser printer however needs more RAM
because it must image an entire page at a time. Most Laser printers
have 512K RAM minimum and occasionally, that is insufficient.
Although you can access the additional RAM of the 1040 or Mega by sending
a pointer to a graphic image in RAM, (completely non standard), this is
not the method used by most applications that were written to use the
500 or so other printers in already in existence. AGAIN, WHY?

[E] If more than 38K is sent to the Diablo emulator before a form feed
is encountered the incoming data will begin to CORRUPT the Diablo
emulator code. If it doesn't get confused and quit taking characters it
will eventually bomb...... In any case, you are WIPED out!.

[F] HP, Quadram, Cannon, Texas Instruments, Apple Laserwriter and many
other laser printers will print the page as it is imaged,(progressively),

as their buffers fill rather than overwrite there own control code.
The lack of error checking in the diablo emulator makes it easy to send
enough data to trash the emulator itself and ultimately cause a system
crash...... GOOD THINKING!

[G] There is no provision to move the print head by x/300 inch in
microspaced units (the actual amount used by the printer).
Being able to move in these small increments with out actually printing
would enable very fine micro-justification. Instead, it is necessary to
set the HMI value to 1/120 inch, send a space, then reset the width to
that of the next character, then send the character. Unfortunately this
can make up to 65K per printed page and would then overflow the SLM804
buffer which would definitely crash the computer thus rendering the
entire effort as useless. .....AH YES, PROGRESS!

JUST FOR YOU.....GREGG.

                      IS THIS THE SAME ATARI?
                      =======================

Here we present a conference that took place in Canada on July 10, 1988.
After you read this folks, see if, in your heart, you can honestly say
Atari has and is treating the United States userbase fairly.

Edited transcript of a conference held on CBCHAT July 10, 1988 with
Julius Oklamcak of Atari Canada. This transcript may be freely
distributed provided that it is not altered in any way.

CBCHAT is available on iNET in Canada and iNET America in the US.
For further information contact Paul Lantz on Compuserve
(76515,1201).

Welcome to the CBCHAT Atari16's Sunday night conference. Tonight we
have a guest, Julius Oklamcak of Atari Canada. Julius will tell us some
of the current developments at Atari and then will take questions. Glad
to see you got here Julius

01 [C18] Julius@Atari: Well...first off my official title is
Technical Support. This entails many things of technical nature in
respect to Atari hardware and software.

01 [C18] Julius@Atari: What's new: In the last few weeks we have
had the arrival of the PCF-554 5 1/4" disk drive. Originally meant
for the PC1, it works (with a step rate slow down utility) on ST's and
MEGA's. MSLP is $299.95

01 [C18] Julius@Atari: Just recently arrived is the SFP-004
(errr...Motorola 68881 math co-processor board for MEGA's). This card
will speed up floating point math anywhere from 3 to over 20 times
(function dependant).

01 [C18] Julius@Atari: In about two weeks we will be selling the
develo per documentation seperately. There will also be a support
package available seperately that will make you a registered developer
and you will receive newsletters, etc.

01 [C18] Julius@Atari: R&D input: A new system of feedback from
Atari subs has been put into place with the beta testing of the new
TOS. Right now, we (and YOU!) have a heck of a lot of input
capability as to what we want to see done to TOS.

01 [C18] Julius@Atari: CD-ROM: We have developer units in the
warehouse *right now* (including developer documentation)*. I really
don't know when the players themselves are going to arrive. Right now
Atari is in the process of having software developed or ported for the
playe

01 [C18] Julius@Atari: Another interesting development is in the
form of third-party add on cards for the MEGA's. Right now there are
three high-rez (1280x960) boards in the prottype stage. It is really
nice seeing Timeworks DTP or PPP on a 19" monitor!

04 [C18] bmackay: Anything new in the way of upgrades for us old
foggies with 520's and 1040's?

01 [C18] Julius@Atari: bmackay: The only upgrade I am aware of for
520's and 1040's is the infamous blitter chip <grin>. Right now it
looks like a fall release with the newest TOS.

01 [C18] Julius@Atari: We are also starting to see some very heavy
duty software (i.e software that will compete with the brand name
titles in the PC world like AutoCAD and Ventura), Canadian developed
DynaCADD (2D and true 3D CADD) and Calamus has turned...heads at shows
like CAD/CAM & Robotics and Comgraph.

01 [C18] Julius@Atari: We are also starting to market the MEGA as a
solutions system (CADD and DTP) through VARs and specialty retailers.
On the home front you will see a fair amount of advertising and
promotion to get the 520 and 1040 in folks homes.

04 [C18] bmackay: What kind of RAM requirements for some of the
heavy hitting software packages?

01 [C18] Julius@Atari: bmackay: DynaCADD and Calamus prefer two
megs. Howev er, Calamus has planned a smaller version for 1 meg
machine owners. Of course, Publishing Partner Professional will work
on a 512k machine...so the choice is there.

08 [C18] James [GOD]: Okay, have you seen any of these Turbo boards
that are being put out by these third party people and how compatible
are they with TOS?

01 [C18] Julius@Atari: James: No, I haven't. I have only heard
third hand reports. Bruce...

04 [C18] bmackay: I've seen messages about Beta testing of new TOS
chips. What kind of availability and price are they going to come in
at? I've given up on the blitter, but is that part of the ROM release
you mentioned for fall?

01 [C18] Julius@Atari: Bruce, since the TOS is still under Beta Test, it is difficult to say when they will arrive (something may come up). Price wise I would say the same as the current ROMs are (under $100)

01 [C18] Julius@Atari: Yes. The TOS under test is part of the fall release. In Canada we are also doing a French-Canadian TOS with all the menus and dialogs in French for the Quebec and Gov't markets.

08 [C18] James [GOD]: Julius, are there any plans for a version of Gdos, that will allow the 520 and the 1040 to output to the laser printer.. who wants to go after Ian?

01 [C18] Julius@Atari: James, no can do. To build a 8.5x11 page requires 990,000 bytes of RAM. GDOS 'writes' the image into this buffer then prints it. The whole page needs to be sent to the printer in real time, i.e., you can't pause, build, send, pause, build, send, etc.

11 [C18] ianmac: Julius: I seem to sense more 2 Meg than 4 meg machines, though I am very satisfied with 4. What have been relative sales and what is the strategy?

01 [C18] Julius@Atari: MEGA's have been selling rather well in the last few months. The folks in Sales are very happy with things. Because of the promotions, the MEGA 2 has been what we have focused on recently...

03 [C18] Bob G.: Julius> What is Atari planning to improve on it's retailers support...it has been noted as very sparse at best so far?

01 [C18] Julius@Atari: Sales has come up with "The MEGA Solution" - things like "Birth of a New Breed" for CADD. The whole thing is built on a machine that is powerful, yet costs usually half the price of the competion.

01 [C18] Julius@Atari: We are opening up more service centres where technicians come in here (or someone from Atari goes out) for training. To help retailers with advertising we have set up a system where ads are created by professionals for them.

01 [C18] Julius@Atari: We have reps in all major areas of the country so the dealer has someone to talk to right there, and then the rep gets back to us...just as a side note, I'd like to hear from dealers on the technical side more often! :-)

00 [C18] Vance: Have you heard of any new virus's that we should worry about?

01 [C18] Julius@Atari: Nope, haven't heard of any new viri (?sp :-)

13 [C18] bb: one comment, I was just in Vancouver and visited two Atari retailers, they had all the hardware on display but the software selection was almost nil...I was surprised.

01 [C18] Julius@Atari: bb: Maybe someone should show the dealers the latest software list. It almost approaches 2000 titles world wide. We usually suggest to the dealer that he get the top packages in (like Timeworks, Publishing Partner, etc.)

08 [C18] James [GOD]: With a Forth Quarter release of the Abaq, and a hopeful Jan release for the 68030 Unix machine, is Atari's development team not wearing itself a little thin?

01 [C18] Julius@Atari: James: "No comment" <big grin>

13 [C18] bb: We have a 520 and a 1040 at work. They will not run a printer without a buffer attached, any reason for that?

01 [C18] Julius@Atari: bb: Some printers have ridiculously (?sp) low pull up resistors. The ST uses the parallel port on the sound chip to drive the printer. With some printers there just isn't enough umph to drive it. Usually with daisy wheels and some lasers I have seen this

04 [C18] bmackay: In the hard drive department, are there 40, 60, 80, etc... drives soon (already?) available? I'm toying with the idea of upgrading my SH204. Other than voiding my already expired warranty are there any hardware problems with dropping a larger hd inside t

01 [C18] Julius@Atari: Bruce: Sometime in the fall you should see larger and faster hard drives. Many people have replaced the 20 meg inside the 204 with a 40, 60, or even 80 meg unit and no problems have resulted. I am toying with the idea of popping a fast 40 meg SCSI drive

11 [C18] ianmac: I have "imposed" ST on students who are nervous about availa bility of math support in Pascal or Fortran... 11 [C18] ianmac: By this I mean Fourier transform, bessel functions, curve fitting, etc. Any suggestions?

01 [C18] Julius@Atari: If you can get the sources for FFT, Bessel, etc, you should be able to compile them on the ST with few problems. The ST is strong in languages in terms of variety and capabilities. I would start to find the sources for the various math that I need (or even make it an 'exercise for the student' <big grin>)

13 [C18] bb: Is it true that there will _not_ be any upgrading of Micrsoft Write?

01 [C18] Julius@Atari: bb: Can't say. Microsoft Write was contracted from Microsoft, who in turn delivered what 'we ordered' :-) If, (note: *if*) Atari wanted upgrades or new versions, they would no doubt have to be contracted for with Microsoft. It all depends on the demand

08 [C18] James [GOD]: Julius, I have been reading about Dbase II, etc available in Europe, have you heard of any plans for it to be released it to be releas ed here.. Also games like Rolling Thunder Available there.. will they work on these Machines or is there a ROM conflict.

01 [C18] Julius@Atari: I haven't heard of dBASE II in Europe(!). All properly written software should work on all machines (wherever they are). Some software makes assumptions (I saw a game that put the video hardware into PAL mode) and does not work, properly or at all.

04 [C18] bmackay: Any speculation as to why the cartridge port on the ST has been so under-utilized? There's been a few clock cartridges, desk cart, magic sac and that's about it so far. BobG is

01 [C18] Julius@Atari: I think that it is partly because of price,
and that you can have only one installed at a time. It would have
also been nice if it had been Read/Write instead of Read only <grin>.

04 [C18] bmackay: There's a hack around somewhere I believe from a U
of Toronto student for a read/write cartridge interface. Any interest
from Atari in producing something like this? What about an official
Atari clock for the 520/1040?

01 [C18] Julius@Atari: Yes, it is possible to 'fake' writes on the
cart port. But extra logic and programming is required (drives the
price up). I don't think that there will be a clock for 520/1040's
from Atari. Third party has already done a good job! :-)

03 [C18] Bob G.: Julius> There has been a definite crop of defective
drives with batches of 1040 and Mega STs..is there going to be a
technical bulletin released to dealers on this ie. recall...

01 [C18] Julius@Atari: Bob, our Service department is handling that
(very well I must say) by replacing drives which are found to be
defective.

08 [C18] James [GOD]: Do you think that Atari will be putting out
some end user documentation on GDOS like how to change the assign.sys
file.. etc.. you don't know how many systems I have had to reconfigure
because someone wanted to add a font, and killed something?

01 [C18] Julius@Atari: I'm hoping that we will see a better GDOS
install program, in the meanwhile I will be writing some GDOS docs for
folks (after the dev docs are done! :-)

13 [C18] bb: I was wondering why Atari has not supported (or
developed a) the 8 bit emulator? (I have $1500.00 of software on the
shelf and room to run the ST only).

01 [C18] Julius@Atari: Because we still want to sell 8 bit machines?
 <big grin>

01 [C18] Julius@Atari: Seriously, to properly and *FULLY* emulate
the 8 bit at a useable speed would require hardware add-ons for the
ST. In such a way that it wouldn't add to the ST easily (cut trace,
solder, cut trace, solder, etc.) and the price would... be higher than
a 65XE or XEGS.

04 [C18] bmackay: There's a 68000 based game machine coming out. I
know marketing is not your dept, but are they going to make darned
sure it isn't associated with the ST/Mega's?

01 [C18] Julius@Atari: Bruce: re: your question. I dunno and can't
rightly say.

01 [C18] Julius@Atari: I just want to say that I think it is great
to have the support of folks like you! The time and effort to run a
service like this is not small. You help out fellow Atari owners by
providing a place they can get answers to questions...
01 [C18] Julius@Atari: public domain software, and someone else who
owns the same machine. A big Thank you from us at Atari!

Paul: what do you do with that demo ABAQ on your desk?

01 [C18] Julius@Atari: Play with Helios, watch the ray-traced demo,
and wait for the developers kit to arrive. <grin>

01 [C18] Julius@Atari: Just throw money at my feet. <GRIN> It is
going to be a hot machine. The workstation makers better watch out.
Fully loaded with transputers it specs at 170 MIPS and 25 MFLOPS (that
is

08 [C18] James [GOD]: Julius, any Idea how many add-on CPU's will be
easly added to the ABAQ.

01 [C18] Julius@Atari: 170 million instructions per second and 25
million floating point operatios per second). People start to call
machines with specs like that "Personal Supercomputers". James: 4
farm cards, each with 4 T-800's , for a total of 17 transputer chips.

08 [C18] James [GOD]: Great but is it not true that Commodore has
just got the rights to use Helios as well?

01 [C18] Julius@Atari: Helios will hopefully become that standard
operating system for transputers. This will make the acceptance of
the transputer that much easier. Besides, for the specs I've seen on
their transputer board, it is, well, not as fast as it could be!
<grin>

04 [C18] bmackay: What's the DRAM limit in the old original 520's?
I've upgraded using the old piggy back and solder for 6 hours to 1
meg. What kind of upgrade could I do on it with the new 1 meg DRAMS?

01 [C18] Julius@Atari: Bruce, using 1 meg chips you could go to 4
megs.   If you don't take out the original 512k, then only 2.5 megs.
The MMU allows two 'banks' of different RAM chips...you can mix 1mb
and 256k chips...but only in certain ways. If you...

01 [C18] Julius@Atari: already have 1 meg in yer 520, then some of
it will have to go.

04 [C18] bmackay: But if I tear it all out and replace with 1 meg
chips it will be 4 megs then?

01 [C18] Julius@Atari: Yes!

04 [C18] bmackay: And no problems from the power supply end?

01 [C18] Julius@Atari: Bruce: Dunno. PSU should be rated at 50
watts.   Though, third party boards seem to run without a hitch.

08 [C18] James [GOD]: Do you know of any plans for add-on to the
ST's to allow it to use the new Atari Monitor using 1Meg internal Ram
and a 68000 to drive the graphics, Hmmm?

01 [C18] Julius@Atari: James, I see you have been reading ST-Log.
:-) Their ain't no such thing.

03 [C18] Bob G.: Any possibility in upgrading the 68000 to a 68020?

01 [C18] Julius@Atari: Bob: Some changes would have to be made to
the OS. And because the way the ST is designed, you would not see the

same speed incre ase as you would from a machine designed with the '20
from day one. Some folks in Germany have done this though...

01 [C18] Julius@Atari: they added their own 32 bit RAM to get the
raw speed up.

04 [C18] bmackay: The Amiga (can I say that word here?) crowd have
been replacing the 68000 with 68010's. Any advantage to doing this on
an ST?

01 [C18] Julius@Atari: For the 5% speed increase in some cases?
Dunno... Though, if you do it, you would have to make some changes
to TOS because of something called "stack frames". Better to save up
the pennies for one of them 16 Mhz 68000 boards. :-)

08 [C18] James [GOD]: I have been hearing alot about the ST and MIDI
lately (one of the reasons I bought the thing in the first place) from
Europe and the US, is there anything that you know about in Canada..
Name Dropping perhaps ?

01 [C18] Julius@Atari: Oscar Peterson? <grin> A MEGA is one of the
machines he uses. MIDI and Music stores are doing really well with
the ST. Right now it is a choice of the Mac or ST, with the ST
offering the better price and software that is just as good. James:

08 [C18] James [GOD]: Mac, I heard that unless you are using a Mac
II ($7000) the ST is the only machine that can do real time MIDI..
Also have you seen the Hawk Scanner for the ST.. 400dpi scanner, FAX,
photocopier.. etc?

01 [C18] Julius@Atari: Hawk Scanner? Yes. Looks really neat.

Paul:>I have a question that is basically what do I buy next? What
is the main difference you see between the Transputer and 68030 paths?
 Where should home and small business users be looking.
Supplementary can you estimate relative costs of abaq and 68030
machines

01 [C18] Julius@Atari: Paul: Home I would suggest a 1040ST. For
small business, depending on the needs, a MEGA or (yech) PC. Down
the road something that runs Unix, as I think that will be the next
wave (like MsDOS appears to be right now).

01 [C18] Julius@Atari: Above $5000, below $10,000 (possibly...subject to
change...just a guess :-)

08 [C18] James [GOD]: Julius, is there any truth to the rumor that
someone is trying to port UNIX over to the TRANSPUTER, one that will
spread the kernal over the CPU's?

01 [C18] Julius@Atari: They would have to do that. Right now,
Helios runs a 20-30k 'kernal' on each transputer. Problem is, Unix
was never designed for parallel and distributed processing. It needs
major hacking and the way apps are written and work. Helios...on the
other hand was designed that way from day one.

08 [C18] James [GOD]: Now onto everyones favorite.. As of late I
have been hearing quite a bit about companies pulling out of the ST
market because of Piracy.. What is Atari's view of the perceived
problem of piracy on the ST? anybody else?

01 [C18] Julius@Atari: All computers have a piracy problem. We are
doing our part by shutting down pirates and taking them to court. The
thing is, these 'people' are causing great harm to the ST. Software
appears pirated before it is released. People don't buy it, thus...
software companies can't make money. They move onto another market
where they can make money.

08 [C18] James [GOD]: I have been reading about a Tranputer based
cartridge for the ST in Europe.. do you know of any plans for anyone
to bring it over here?

01 [C18] Julius@Atari: You mean the K-MAX system from Kuma in
England? It is a bit pricey, and there appears to be no demand for
it. So...no one wants to bring it over.

08 [C18] James [GOD]: Or the Spectrum analyzer, or the Oscilliscope
etc..

08 [C18] James [GOD]: Does it work like advertised?

01 [C18] Julius@Atari: There was a STart article back a year or so
about it... :-)

08 [C18] James [GOD]: Any news of any more large software developers
signing on the ST since WP corp?

01 [C18] Julius@Atari: How about Turbo C in Germany? ;-)

08 [C18] James [GOD]: NIce but turbo C is a little late, once you
start playing with Laser C's new version of megamax

01 [C18] Julius@Atari: The guys in Germany tell me it runs circles
around Laser C. It generates the best 68000 code of any compiler so
far (this is word from the beta testers).

                            :OF NOTABLE NOTE:
                            =================

So this is the way it is in Canada, more information, more hardware and
they have the documentation to the CD-ROM in the Developer's Kit!

Egad....what's the story in the USA? 300.00 antique developers kits, no
5.25 inch drives for the St, no Atari PC . What has Canada got that we in
the USA do not have? Why the big solitaire? Does it not seem strange
that Atari in Canada has MUCH MORE to offer it's userbase?

LIKE THEY SAY IN FLATBUSH...WHAT'S THE STORY JERRY? Under whose butt must
we light a fire to make things happen as well here? After reading the
contents of this conference I am shocked at how easy it is for Atari to
hand us, the US Userbase, the SHORT end of the stick! Thanks Sam......

Sam, are you sure you wanted Evangelists? and not easy marks?

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                     THE ALARM RINGS ON!
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By T."Rex" Reade


If we all were to vote on the top ten graphics people in the Atari World I
am sure that Tom Hudson would be among them.  It hurts my heart to hear
that Tom, in his quest for financial security, has left the Atari arena
for the greener pastures of IBM land.  Whom do we blame?  What is the
cause?  Why has the Atari ST community lost this magnificent mind?

In my humble opinion, Atari IS the bottom line here.  First, by claiming
that there are only 220,000 or less STs in use in the USA, (everybody must
own at least four store bought copies of Dungeon Master).  Second, a total
lack of advertising OF THE ST AND MEGA has given the industry and public
the impression that those products are dormant.  Third, this is the most
serious in my opinion, developer support is still super bad and the
attitude is ..."you don't like it, rewrite it" ..or, if Atari didn't write
it, you can be sure it is flawed.  Richard Frick is gone, and now we suck
wind to see updates of any consequence for the Developer's Kit.  One
developer seems to pop in mind because of the loud and clear message
he made when he said:


        "They promise all kinds of help, but when you call looking for some,
         you either get stonewalled or told it is your problem not ours....
         this lead us to the point of practically having to re-invent the
         wheel (OS)."


Here of late, we see a number of people who signed non-disclosure
agreements with Atari concerning the beta program for the new TOS in ROM
YET we see all kinds of messages about what they will do and how they will
enhance the machine etc....Clearly, these folks are not malicious nor are
they egotistical maniacs who must wave the "new mega roms" in our faces.
They are merely trying to keep the interest level up in the area of Atari
ST/MEGA computers.  No matter where we look, we see all kinds of hype for
ALL the other computers and NOTHING about the ATARI computer(s).
The task these people are trying perform is Atari's responsibility and
nobody else's.  Atari is truly a wimp in the Advertising and Promotion
areas.  It is now AUGUST.......SEPTEMBER is a few weeks away, (THE FALL)

ATARI SAID:        IN THE FALL (LAST QUARTER OF '88)....WE WILL

                1- Begin a strong ad campaign

                2- Have the new ROMS for you

Granted we heard already that there may be delays, but being optomistic,
let's give Atari a chance to BE ONTIME FOR ONCE!!

Atari may wake up when they find all the programmers and developers of any
quality have since moved on to greener pastures or, perhaps this is just
what they want!  Make the machine, create the software, develop the
hardware,..monopolize the whole nine yards..I don't believe this for a
minute but it sure looks this way.  With what we have received in the way
of confidential stories from Developers and Programmers, the darn file
reads like an industrial horror story.

We at ST REPORT truly feel the ST and the MEGA are indeed the best to be
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had for the dollars in the USA today. I know, for myself, there is no
other computer in my immediate future. The bad part is I have no idea at
all where or what the future of the machine is. This is Atari's fault and
squarely on Atari's shoulders..the only picture presented by Atari is one
of reliable confusion. The revolving door, vaporware, dealership vs.
mail order, the concept that the folks who purchase the ST/MEGA computers
are really gamers first and computer operators second, and a host of other
inconsistancies continue to magnify the problems with the company and
continue to overshadow the fantastic products.

We still feel that certain members of the board need to be taken out of
the areas that directly effect the daily business of Atari and placed
where they will be of less harm. Know-it-all attitudes and techie
recluses have no business making profound decisions that effect the
entire National Scene for Atari.

An open plea to Tom Hudson:

 "Please do not abandon us, but in fact, think of us as lost in the abyss
  of Atari indecision! Once Atari gets it's act together and begins to
  advertise and distribute the ST and MEGA on a grand scale the Great
  Starship of ATARI will be on the right heading".

            For now, it remains, The Atari Ship of Fools.

                   SPECIAL OFFER FROM WORD PERFECT
                   ===============================

Special User Group Purchase Agreement

 WordPerfect Corporation is offering WordPerfect 4.1 for the Atari
 to user group members at a special reduced price of $155.00.

 This special offer will only be available from July 15th
 through September 15th.

 Please complete the information requested below and return form to:

         WordPerfect Atari Orders
         288 W. Center,
         Orem, UT 84057.

         Name_____

         Street_____

         City_____State____Zip_____

Below, you will find the new "official" Registration Form Atari is
requesting all Usergroups to complete and send in. Do this folks, show
Atari just how many of us there are. It sure is nice to see Atari on the
positive side of things again, the Usergroup News Letter is alive and
well. YOU MUST COMPLETE THIS FORM TO RECEIVE THE NEWSLETTER.

ATARI U.S.1988

                           * USER GROUP APPLICATION *

USER GROUP NAME (IN FULL):

ABBREVIATION OR ACRONYM:

WHEN WAS THE GROUP FOUNDED (DATE):

MAILING ADDRESS:

NAME:

ADDRESS:

CITY/STATE/ZIP:

PHONE NUMBER FOR GENERAL PUBLIC:

NUMBER OF REGISTERED MEMBERS:

WHAT ARE YOUR ANNUAL MEMBERSHIP DUES?: $_____

NUMBER OF MEETINGS PER YEAR:

ARE THEY REGULARLY SCHEDULED?: YES / NO

IF YES, WHEN:

WHERE:

DO YOU HAVE A BBS: YES / NO

IF YES, WHAT IS THE NUMBER:

HOURS OF OPERATION:

DO YOU PUBLISH A NEWSLETTER?   YES / NO

IF YES, WHAT IS THE FREQUENCY OF PUBLICATION:

NAME OF THE PUBLICATION:

HOW MANY ISSUES HAVE YOU PUBLISHED IN THE LAST YEAR:

WHAT IS YOUR AVERAGE PRINT RUN?

DO YOU ACCEPT ADVERTISING?   YES / NO

IF YES, WHAT IS THE COST PER PAGE:

NAME OF CONTACT PERSON FOR PUBLICATION:

ADDRESS:

CITY/STATE/ZIP:

PHONE(S):

WHO SHOULD POTENTIAL MEMBERS CONTACT FOR MEMBERSHIP:

NAME:

ADDRESS:

CITY\STATE\ZIP:

PHONE(S):

DO YOU OFFER HELP OR SUPPORT FOR NEW USERS?   YES / NO

DO YOU HAVE A NEW USERS SPECIAL INTEREST GROUP? YES / NO

DO YOU SUPPORT THE FOLLOWING ATARI SYSTEMS?

GAME SYSTEMS: YES / NO   8-BITS: YES / NO

ST: YES / NO   MEGA: YES / NO

PC: YES / NO   OTHER:

DO YOU HAVE SPECIAL INTEREST GROUPS OF EACH SYSTEM?   YES / NO

DO YOU HAVE SPECIAL MEETINGS FOR USERS OF EACH SYSTEM?   YES / NO

PLEASE LIST LOCAL SHOWS, AND APPROXIMATE DATES, IN WHICH YOUR GROUP
ANTICIPATES PARTICIPATION:
(I.E. LIBRARY, SHOPPING MALL, SCHOOL, OR LOCAL COMMUNITY COMPUTER SHOW):

NAME _____ LOCATION

DATE APPROXIMATE (EST) ATTENDANCE _____

NAME _____ LOCATION

DATE   APPROXIMATE ATTENDANCE

THERE SHOULD BE ONE, AND ONLY ONE, ATARI CONTACT/USER GROUP SPOKESPERSON
REPRESENTING YOUR GROUP; THE NAME OF THE EXECUTIVE CONTACT IS (FOR ATARI
USE ONLY):

NAME:

GROUP TITLE:

ADDRESS:

CITY/STATE/ZIP:

PHONE(S):

NAME OF ATARI RETAILER WHO WILL SPONSOR OR OFFER AFFILIATION:

RETAIL STORE NAME:

CONTACT:

THIS APPLICATION COMPLETED BY:

NAME:

SIGNATURE:

DATE:

PLEASE NOTE: FOR OFFICIAL ATARI USER GROUP AUTHORIZATION, THIS
APPLICATION MUST BE COMPLETED IN FULL. PROOF OF MEMBERSHIP MUST
ACCOMPANY APPLICATION. (PROOF OF MEMBERSHIP CAN BE ANY OF THE FOLLOWING:

MEMBERSHIP NAMES AND ADDRESS, A GROUP MEETING PHOTO, OR ANY OTHER ITEM
THAT WILL PROVE THAT YOUR MEMBERSHIP EXCEEDS THE MINIMUM REQUIREMENT.)

PLEASE COMPLETE AND RETURN TO:

                    USER GROUP COORDINATOR
                    ATARI CORPORATION
                    1196 BORREGAS AVE
                    SUNNYVALE CA 94086

                    NOSTALGIA - REMEMBER WHEN?
                    ==========================

The new hardware item now shipping from Atari is the "crown jewel" in the
product line, the Mega. The first production units were finally shipped
out recently and the blitter WAS included. Atari is now off on a "Mega
rollout tour" as they seek to introduce the new machines to "professional"
dealers throughout the country.

Atari has also lined up a number of "professional" software publishers,
such as WordPerfect, which will be debuting the ST version of WordPerfect
on the tour, to accompany them. Yes, "professional" seems to be the
operative word here, as the Mega will have "professional" dealers,
"professional" software, and a "professional" price!

The retail price for a Mega 2 is $1699 for a mono system and $1899 for
color. The Mega 4 goes for $2399 mono and $2599 color. Add this to
stringent Mega dealer qualifications and a STRICT no mail order policy,
and it becomes evident that discounts on these prices will be very hard

to come by, at least for now. This may account for the recent surge in
sales of the 520ST and 1040ST, as people who were patiently waiting for
the Megas to arrive got wind of the new prices and decided that "Power
without the Price" was better than "Power WITH the Price". In any case,
other "professional" features of the Mega include a attachable keyboard
with much improved feel, an internal expansion socket, a 68000 bus
extender socket (for external expansion), a battery-backed internal
clock, new ROMs, an internal DMA port and power supply tap, and, of
course, the long-awaited blitter chip.

 OTHER ATARI HARDWARE STILL AMONG THE MISSING

 All is not peaches and cream with Atari's promised hardware, however. A
number of new products have still not made their appearance and Atari is
not being very helpful in providing information about them. First and
foremost is the Atari Laser Printer, which was supposed to be out BEFORE
the Megas.

Atari claims that the printer is working fine, but the INTERFACE that
allows the printer to pass along the ST DMA bus is still having problems.
They say it should be ready to ship "any day now". Of course, by the time
it is ready a $1500 laser printer with no on-board RAM and limited to use
with one brand of computer might not seem to be as much of a bargain as
it seemed back in January.

Cold on the heels of the Laser Printer is the Atari PC. Still missing
after months of on-again, off-again announcements from Atari, the Atari
PC, like the Laser Printer, might not be much of a bargain by the time it
makes its appearance. After almost being killed by a doubting Sam Tramiel
the PC is apparently on again, but Atari does not seem to be very
enthusiastic about it. A $700 PC clone with a monochrome monitor and no
slots doesn't seem like such a great deal when a local electronics store
here in Brooklyn is selling Blue Chip PC clones for $438 complete with
mono monitor and six slots.

 NON-ATARI HARDWARE AND SOFTWARE

Magic Sac users now have hard disk support and compatibility with more
than 90% of present Macintosh software thanks to version 4.52 of the Magic
Sac boot software, now shipping from Data Pacific. Present Sac owners
can get the new software, along with a completely re-written manual, by
sending their original Atari boot disk, along with $20, to Data Pacific.
Ver. 4.52 is also now shipping with all new Magic Sac cartridges. The
long-awaited Translator ONE, which will allow STs using the Magic Sac to
read original Mac disks, was supposed to begin shipping on October 1,
however a shipment of mislabeled chips from "Raving Idiot Computer Chips"
began trashing Translator mother boards being assembled and played havoc
with Data Pacific's shipping schedule. David Small is picking up the
pieces (and preparing his lawsuit), so expect delivery to be delayed a
couple of weeks or so.

Electronic Arts has finally admitted that the ST market does exist and has
just released a number of their programs, including Music Construction Set
(not Deluxe), The Bard's Tale, and the long-promised Marble Madness, to
try to make a few bucks off of it. I wonder if Trip included any "buy an
Amiga" messages with the new programs? Another long-time Atari nay-sayer,
Epyx, has also released some new ST programs, including Boulder Dash
Construction Set.

ICD Inc., makers of the P:R:Connection the MIO board, the US Doubler and

SpartaDOS, among others for the Atari 8-bit line, has just introduced
their first ST product. The ICD SCSI Host Adaptor retails for $134.95 and
allows use of standard SCSI controllers and hard disks with the ST. There
are a number of other products on the market that do the same thing
(from Berkeley Micro Systems and Supra) for about the same price, but the
ICD is the only one that has a second DMA port to allow another DMA
device to share the DMA bus. This means that an Atari, Supra, or Astra
hard drive could be used at the same time as an ICD setup. Packaged with
the Host Adaptor is a disk of ICD hard disk utilities that allow, among
other more usual functions, a hard disk to be formatted to give about 10%
more storage space than it would if it were formatted using conventional
software (approximately 2 extra megs on a 20 meg hard drive). ICD also
announced that they will be selling a complete hard disk assembly using
their host adaptor. It will be housed in a low-profile case that can
also serve as a monitor stand, and it will contain either one or two hard
drive mechanisms of 20, 30, 40 or more megs, depending on the
configuration ordered, and it, like the host adaptor, will have a second
DMA connector to continue the DMA bus. It will also have a SCSI port to
allow up to 7 additional SCSI devices to be controlled by the host
adaptor. This will allow flexible and relatively inexpensive expansion of
hard disk storage (great for BBSs!). Final prices were not announced,
although ICD said that they expect a single 20 meg system to be comparable
in price to the Atari and Supra 20 meg units.

Speaking of hard disk utilities, Beckemeyer Development has released a
package called the Beckemeyer Hard Disk Tool Kit which features an
excellent hard disk backup program. Finally, Future Systems Inc., current
makers of the Indus GT disk drives for the 8-bit computers, has just
released the GTS-100, a double-sided 3.5" floppy drive for the ST.

Except for the usual avalanche of games and such for the ST, and the
renewed interest in the 8-bit computers (a.k.a. the XE SGS), that's it
for now.

 LATE BREAKING FLASH!

Word from Neil Harris on GEnie is that the IBM hardware emulator box, which
had been "on the back burner" while Atari fiddled with the PC, in now
apparently back under full development at Atari. My guess is that Atari
discovered that they could sell the Megas to the business market much more
effectively if they featured MS-DOS compatibility (in fast hardware rather
than slow software), much like the Mac SE/II and the Amiga 2000.
Of course, no price or release date was mentioned.

These things were the sole source of excitement last year or could have
been last month?......you tell me.

     ANTIC is proud to present the first of Tim Oren's bi-monthly
columns exploring the GEM programming environment. These columns are
aimed at professional ST developers, but we encourage everyone to join
in and collect the columns for future reference.

HELLO, WORLD!

For those whom I have not met in person or electronically,
an introduction is in order. I am a former member of the
GEM programming team at Digital Research, Inc., where I designed
and implemented the GEM Resource Construction Set and other parts of
the GEM Programmer's Toolkit. I have since left DRI to become the
user interface designer for Activenture, a startup company which
is developing CD-ROM technology for use with the Atari ST and other
systems.

The purpose of Professional GEM is to pass along some of
the information and tricks I have accumulated about GEM, and explore
some of the user interface techniques which a powerful graphics
processor such as the ST makes possible.

GROUND RULES

I am going to assume that you have both a working knowledge of
the C programming language and a copy of the ST Programmer's Toolkit
with documentation (available from Atari). If you lack either,
don't panic. You can read the columns to get the flavor of programming
the ST, and come back for a more serious visit later on.

For now, I will be using code samples that will run with
the Atari-supplied C compiler, also known as DR C-68K, or Alcyon C.
I will be using the portability macros supplied with the Toolkit,
so that the code will also be transferable to other GEM systems.

Both of these items are subject to change, depending on
reader feedback and the availability of better products.

If you do not have a copy of the source to the DOODLE.C
GEM example program, you should consider downloading a copy
from SIG*ATARI. Although it is poorly documented, it shows
real-life examples of many of the techniques I will discuss.

Getting started with a windowed graphics system seems to be
like getting into an ice-cold swimming pool: it's best done all at once.

Anyone who has looked at "Inside Macintosh" has probably
noticed that you have to have read most of it to understand any of it.
GEM isn't really much different. You have all the reference guides
in your hand, but nothing to show how it all works together.

I am hoping to help this situation by leading a series of
short tours through the GEM jungle. Each time we'll go out with
a particular goal in mind and follow the path that leads there.
We'll look at the pitfalls and strange bugs that lurk for the unwary,
and show off a few tricks to amaze the natives.

The first trip leaves immediately; our mission is to get a
window onto the ST screen, with all of its parts properly initialized.

WE DO WINDOWS

        One of the most important services which a graphics interface
system provides for the user and programmer is window management.

        Windows allow the user to perform more than one activity on
the same screen, to freely reallocate areas of the screen for each
task, and even to pile the information up like pages of paper to make
more room.   The price for this increased freedom is (as usual) paid
by you, the programmer, who must master a more complex method
of interacting with the "outside world".

        The windowing routines provided by ST GEM are the most
comprehensive yet available in a low-cost microcomputer. This
article is a guide to using these services in an effective manner.

    IN THE BEGINNING

        In GEM, creating a window and displaying it are two
different functions.   The creation function is called wind_create, and
its calling sequence is:

         handle = wind_create(parts, xfull, yfull, wfull, hfull);

    This function asks GEM to reserve space in its memory for a
new window description, and to return a code or "handle" which you
can use to refer to the window in the future. Valid window handles
are positive integers; they are not memory pointers.

        GEM can run out of window handles. If it does so, the value
returned is negative. Your code should always check for this situation
and ask the program's user to close some windows and retry if possible.

        Handle zero is special. It refers to the "desktop", which is
predefined as light green (or gray) on the ST.

        Window zero is always present and may be used, but never deleted,
by the programmer.

        The xfull, yfull, wfull, and hfull parameters are integers
which determine the maximum size of the window. Xfull and yfull define
the upper left corner of the window, and wfull and hfull specify its
width and height. (Note that all of the window coordinates which we
use are in pixel units.)   GEM saves these values so that the program
can get them later when processing FULL requests. Usually the best
maximum size for a window is the entire desktop area, excepting the
menu bar. You can find this by asking wind_get for the working area
of the desktop (handle zero, remember):

         wind_get(0, WF_WXYWH, &xfull, &yfull, &wfull, &hfull);

    Note that WF_WXYWH, and all of the other mnemonics used in this
article, are defined in the GEMDEFS.H file in the ST Toolkit.

        The parts parameter of wind_create defines what features will
be included in the window when it is drawn. It is a word of single
bit flags which indicate the presence/absence of each feature.

To request multiple features, the flags are "or-ed" together. The flags' mnemonics and meanings are:

NAME- A one character high title bar at the top of the window.

INFO- A second character line below the NAME.

MOVER- This lets the user move the window around by "dragging" in the NAME area. NAME also needs to be defined.

CLOSER- A square box at the upper left. Clicking this control point asks that the window be removed from the screen.

FULLER- A diamond at upper right. Clicking this control point requests that the window grow to its maximum size, or shrink back down if it is already big.

SIZER- An arrow at bottom right. Dragging the SIZER lets the user choose a new size for the window.

VSLIDE- defines a right-hand scroll box and bar for the window. By dragging the scroll bar, the user requests that the window's "viewport" into the information be moved. Clicking on the gray box above the bar requests that the window be moved up one "page". Clicking below the bar requests a down page movement. You have to define what constitutes a page or line in the context of your application.

UPARROW- An arrow above the right scroll bar. Clicking here requests that the window be moved up one "line". Sliders and arrows almost always appear together.

DNARROW- An arrow below the right scroll bar. Requests that window be moved down a line.

HSLIDE- These features are the horizontal equivalent of the RTARROW above. They appear at the bottom of the window. Arrows LFARROW usually indicate "character" sized movement left and right. "Page" sized movement has to be defined by each application.

It is important to understand the correspondence between window features and event messages which are sent to the application by the GEM window manager. If a feature is not included in a window's creation, the user cannot perform the corresponding action, and your application will never receive the matching message type. For example, a window without a MOVER may not be dragged by the user, and your app will never get a WM_MOVED message for that window.

Another important principle is that the application itself is responsible for implementing the user's window action request when a message is received. This gives the application a chance to accept, modify, or reject the user's request.

As an example, if a WM_MOVED message is received, it indicates that the user has dragged the window. You might want to byte or word align the requested position before proceeding to move the window. The wind_set calls used to perform the actual movements will be described in the next article.

OPEN, SESAME!

The wind_open call is used to actually make the window appear
on the screen. It animates a "zoom box" on the screen and then draws
in the window's frame. The calling sequence is:

    wind_open(handle, x, y, w, h);

The handle is the one returned by wind_create. Parameters x, y,
w, and h define the initial location and size of the window. Note that
these measurements INCLUDE all of the window frame parts which you
have requested. To find out the size of the area inside the frame,
you can use:

    wind_get(handle, WF_WXYWH, &inner_x, &inner_y, &inner_w,
&inner_h); Whatever size you choose for the window display, it cannot
be any larger than the full size declared in wind_create.

    Here is a good place to take note of a useful utility for
calculating window sizes. If you know the "parts list" for awindow, and
its inner or outer size, you can find the other size with the
wind_calc call:

    wind_calc(parts, kind, input_x, input_y, input_w, input_h,
    &output_x, &output_y, &output_w, &output_h);

    Kind is set to zero if the input coordinates are the inner area,
and you are calculating the outer size. Kind is one if the inputs
are the outer size and you want the equivalent inner size. Parts
are just the same as in wind_create.

    There is one common bug in using wind_open. If the NAME
feature is specified, then the window title must be initialized
BEFORE opening the window:

    wind_set(handle, WF_NAME, ADDR(title), 0, 0);

    If you don't do this, you may get gibberish in the NAME area or
the system may crash. Likewise, if you have specified the INFO feature,
you must make a wind_set call for WF_INFO before opening the window.

    Note that ADDR() specifies the 32-bit address of title.
This expression is portable to other (Intel-based) GEM systems. If
you don't care about portability, then &title[0], or just title alone
will work fine on the ST.

CLEANING UP

    When you are done with a window, it should be closed and deleted.
The call:
                    wind_close(handle);
takes the window off the screen, redraws the desktop underneath
it, and animates a "zoom down" box.   It doesn't delete the
window's definition, so you can reopen it later.

    Deleting the window removes its definition from the system,
and makes that handle available for reuse. Always close windows
before deleting, or you may leave a "dead" picture on the screen. Also
be sure to delete all of your windows before ending the program, or

your app may "eat" window handles. The syntax for deleting a window is:

                     wind_delete(handle);

     THOSE FAT SLIDERS

        One of ST GEM's unique features is the proportional slider
bar. Unlike other windowing systems, this type of bar gives visual
feedback on the fraction of a document which is being viewed, as
well as the position within the document. The catch, of course, is that
you have two variables to maintain for each scroll bar: size and
position.

        Both bar size and position range from 1 to 1000. A bar size
of 1000 fills the slide box, and a value of one gets the minimum bar
size. To compute the proper size, you can use the formula:

        size = min(1000, 1000 * seen_doc / total_doc)

     Seen_doc and total_doc are the visible and total size of the
document respectively, in whatever units are appropriate. As an example,
if your window could show 20 lines of a 100 line text file, you should
set a slider size of 200. Since the window might be bigger than the
total document at some points, you need the maximum function. If the
document size is zero, force the slider size to 1000. (Note: You
will probably need to do the computation above with 32-bit arithmetic
to avoid overflow problems.)

        Once you have computed the size, use the wind_set function
toconfigure the scroll bar:

         wind_set(handle, WF_VSLSIZE, size, 0, 0, 0);

     This call sets the vertical (right hand) scroll bar. Use WF_HSLSIZE
for the horizontal scroller. All of these examples are done for the
vertical dimension, but the principles are identical in the other
direction.

        Bar positioning is a little tougher. The most confusing aspect
is that the 1-1000 range does not set an absolute position of the bar
     within the scroll box. Instead, it positions the TOP of the
bar within its possible range of variation.

        Let's look at our text file example again to make this clearer.
If there are always 20 lines of a 100 line file visible, then the top of
the window must be always be somewhere between line 1 and line 81. This
80 line range is the actual freedom of movement of the window.
     So, if the window were actually positioned with its top at line
61, it would be at the three-quarter position within the range, and
we should set a scroll bar position of 750. The actual formula
for computing the position is:

         pos = 1000 * (top_wind - top_doc) / (total_doc - seen_doc)

     Top_wind and top_doc are the top line in the current window and
the whole document, respectively. Obviously, if seen_doc is greater
or equal to total_doc, you need to force a zero value for pos.
This calculation may seem rather convoluted the first time through, but
is easy once you have done it. When you have computed the position,
wind_set configures the scroll bar:

```
        wind_set(handle, WF_VSLIDE, pos, 0, 0, 0);
```

     WF_HSLIDE is the equivalent for horizontal scrolling. It is a good
practice to avoid setting the slider size or position if they are already
at the value which you need. This avoids an annoying redraw flash on the
screen when it is not necessary. You can check on the current value of a
slider parameter with wind_get:

```
        wind_get(handle, WF_VSLIDE, &curr_value, &foo, &foo, &foo);
```

        Foo is a dummy variable which needs to be there, but is not
used. Substitute WF_VSLIDE with whatever parameter you are checking.

        One philosophical note on the use of sliders: it is probably
best to avoid the use of both sliders at once unless it is clearly
appropriate to the type of data which is being viewed.

        Since Write and Paint programs make use of the sheet-of-paper
metaphor, moving the window around in both dimensions is reasonable.
However, if the data is more randomly organized, such as a tableau of
icons, then it is probably better to only scroll in the vertical
dimension and "reshuffle" if the window's width is changed. Then the user
only needs to manipulate one control to find information which is
off-screen. Anyone who has had trouble finding a file or folder within a
Desktop window will recognize this problem.

     COMING UP NEXT

        In my next column, we'll conclude the tour of the ST's windowing
system. I'll discuss the correct way to redraw a window's contents, and
how to handle the various messages which an application receives from the
window manager. Finally, we'll look at a way to redesign the desktop
background to your own specifications.

ST REPORT CONFIDENTIAL
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New York City The ST game system persists and does, for all intents and
------------- purposes, exist. Seems this firm was given the inside
               track to being the first one to be able to sell the "new"
               game system

Sunnyvale   The portable ST is a full scale reality, seems it's even
---------   nicer than the one displayed at Hanover.

Denver   A number of dealers have unified and are preparing a formal
------   request to be sent to Atari asking for more sales oriented
               professional area representatives.

Albany   IBM has now gone after the midi market with a vengeance,
------   with a keyboard that has both the video and audio
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controllers built in and full audio spectrum available
                   with full video potential also available.

Sunnyvale         Transputer system is a fact but not for the USA for many
---------         months to come.. watch for it in Europe (UK) first.